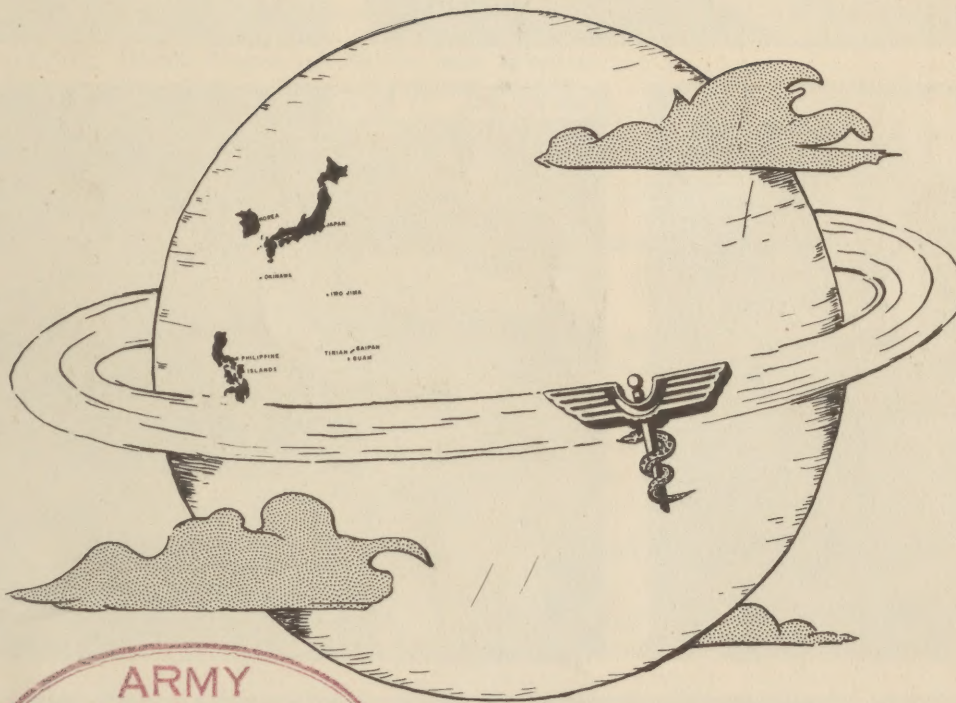


W 2
A 2
9 F219S
RESTRICTED

DOCUMENTS SECTION

MED SEC GHQ FEC

VOL V NO 8
1 AUG 1950



ARMY
MEDICAL
AUG 22 1950
LIBRARY

A FAR EAST PERIODICAL OF MEDICAL DEPARTMENT INFORMATION

SURGEON'S CIRCULAR LETTER

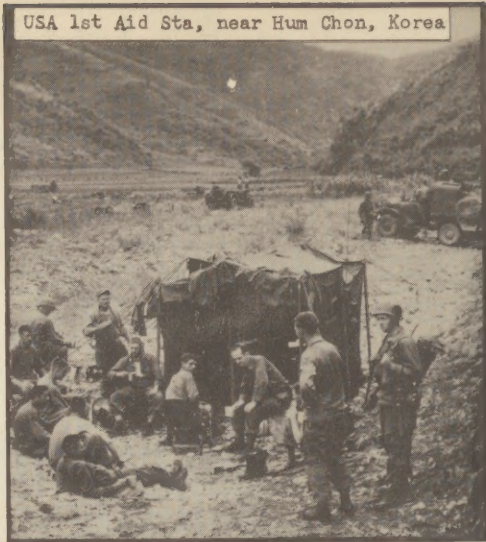
RESTRICTED

RESTRICTED

ROK 2d Army Hospital, 5 Jul, Taejon, Korea



USA 1st Aid Sta, near Hum Chon, Korea



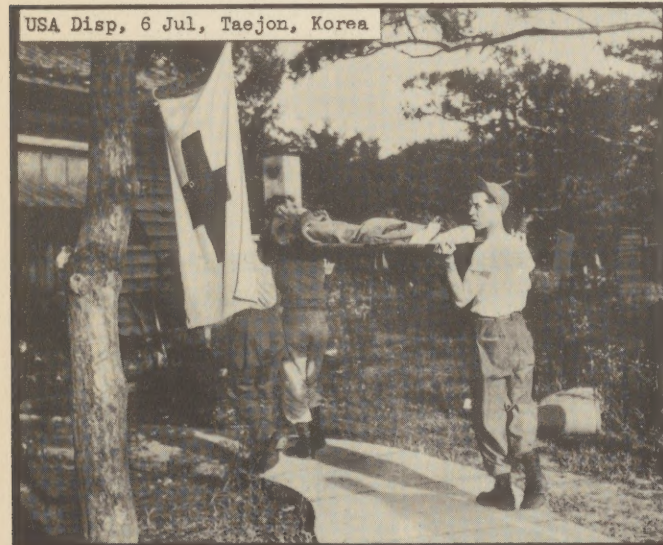
USA 1st Aid Station, "7" Korea



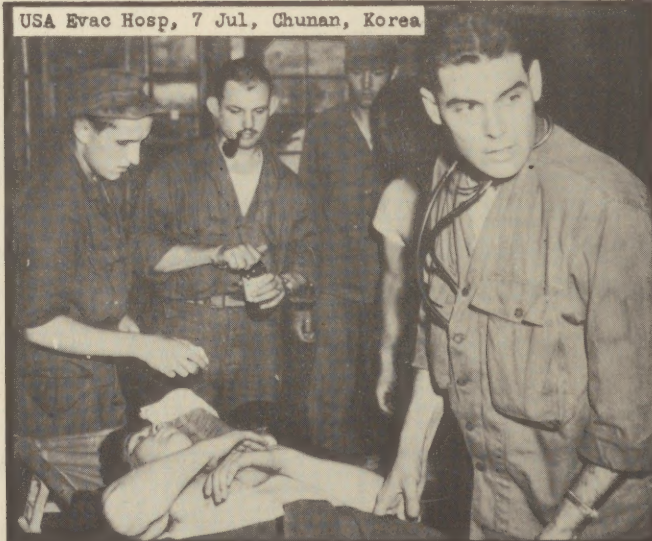
USA Ctr Sta, "7" Korea



USA Disp, 6 Jul, Taejon, Korea



USA Evac Hosp, 7 Jul, Chunan, Korea



RESTRICTED

GENERAL HEADQUARTERS
FAR EAST COMMAND
MEDICAL SECTION

SURGEON'S CIRCULAR LETTER

APO 500

NO. 8

1 August 1950

PART I

ADMINISTRATIVE

<u>SUBJECT</u>	<u>SECTION</u>	<u>PAGE</u>
Organization of the Medical Section.	I	1
Authority to Award the Purple Heart.	II	1
Award of the Bronze Star Medal to MSC Officer.	III	2
Autopsies.	IV	2
Physical Examination re; National Service Life Insurance.	V	3
Temporary Dental Requirements for Enlistment and Induction	VI	3
Combat Neuropsychiatry	VII	3
Clinical Psychology Intern Program at Walter Reed Hospital	VIII	4
New Dental Courses Scheduled	IX	4
Conference on Medical Research	X	4
Hepatic Center Moved to Army Medical Center.	XI	4
Recent Department of the Army and FEC Publications	XII	4
Index.	Inside Back Cover	

I. Organization of the Medical Section

Arrival in the Medical Section, GHQ, FEC: Colonel William J. Moreland, MSC, who completed his assignment as Inspector General at the Oliver General Hospital, Augusta, Ga., has arrived in the Medical Section to assume the duties of Chief, Plans and Operations Division.

Major Thomas P. Caito, MSC, formerly in the Surgeon's Office, Headquarters and Service Group, GHQ, FEC, has been assigned to the Medical Section as Assistant Chief, Operations Branch, Plans and Operations Division.

Major Floyd L. Berry, MSC, arrived from the ZI to assume the duties of Sanitary Engineer Consultant.

Captain James F. Allen, MSC, formerly Pharmacy Officer and Hospital Inspector, Station Hospital, Fort Dix, N.J., has been assigned as Assistant Chief, Personnel Division.

Lt. Elnor L. King, MSC, formerly Administrative Officer, Brooke Army Medical Center, Brooke General Hospital, Ft. Sam Houston, Texas, has been assigned to the Plans and Operations Division.

Departure from the Medical Section, GHQ, FEC: Major Mildred I. Clark, ANC, has completed her overseas tour of duty and returned to the ZI.

II. Authority to Award the Purple Heart

AR 600-45, C-11, paragraph 8b(3) authorizes the award of the Purple Heart by the Commanding General of any separate force outside the continental United States and provides that such authority may be delegated to any field grade officer in the Army of the United States. In a radio message from CINCFE to all major commands relative to the making of awards of decorations to United States personnel, authority to award the Purple Heart was delegated to any field grade officer in compliance with the provisions of the above cited regulations.

III. Award of the Bronze Star Medal to MSC Officer

Lt. Colonel Everett W. Partin, MSC, Chief of the Supply and Fiscal Branch, Medical Section, GHQ, FEC, was awarded the Bronze Star Medal for meritorious service in connection with military operations against an enemy of the United States during the period 27 June 1950 to 12 July 1950. Colonel Partin as Medical Supply Officer with GHQ ADCOM in Korea, under adverse conditions and make-shift facilities, established a system for hospitalization and evacuation of wounded which provided emergency medical assistance and prompt evacuation of casualties.

IV. Autopsies



The Medical Section, GHQ, FEC, has received several queries concerning the performance of autopsies and will attempt to clarify for all Medical Department personnel in this command as to when, upon whose body, and for what reasons autopsies may be performed.

Persons Other Than Military Subject to Military Law (AW-2)

The following while not an all-inclusive list summarizes the principal categories of persons other than military who are subject to military law (AW-2) in the Far

East Command:

- Department of the Army civilian employees
- Department of Air Force civilian employees
- Civilian employees who are paid from non-appropriated funds (e.g., Army or Air Force Exchange employees)
- Technicians employed by private radio companies serving with the Army or Air Force
- Accredited news correspondents

Autopsies may be performed upon the bodies of deceased persons listed above under the provisions of paragraph 19a(1), (2), (3) and b(1), AR 600-550, when:

The commanding officer of the deceased and the surgeon do not agree as to the line of duty and misconduct, or,

Death is due or suspected to be due to foul play, violent or unnatural causes, misconduct or gross negligence, or when death is sudden from unknown causes.

Since an enumeration of every category of individuals other than military persons subject to military law in the Far East Command would be difficult to accomplish, it is suggested that, as to persons not falling within the above listed categories, a specific determination be made in individual cases which may arise by the surgeon of the command or the commanding officer of the hospital. If they cannot make this determination, advice of the next higher commander exercising general courts martial jurisdiction should be requested. Whenever possible permission from the next of kin should be secured prior to performing an autopsy on the body of a person other than military, subject to military law (AW-2) even though authority to do so exists.

Military Personnel:

Paragraphs 1 and 19a (1), (2), (3) and b(1), AR 600-550, and paragraph 19d (1), AR 40-590, authorizes or requires an autopsy to be performed upon the body of any military person, active, retired or undergoing training in this command when:

The surgeon of a command or the commanding officer of a hospital deems such procedure necessary to determine the true cause of death, or,

To secure information for the completion of military record, or,

The commanding officer of the deceased and the surgeon do not agree as to the one of duty and misconduct, or,

Death is due or suspected to be due to foul play, violent or unnatural causes, misconduct, or gross negligence, or when death is sudden from unknown causes.

A post mortem examination is not required in cases of death which occur while operating or riding in government vehicles or airplanes, or while on maneuvers, or during authorized athletic exercises, or otherwise while engaged in the execution of military duty provided misconduct or negligence is not a contributory factor.

Dependents of Military Personnel and of Other Persons Subject to Military Law:

Whenever the surgeon of a command or the commanding officer of a hospital considers it necessary to perform an autopsy on the body of a dependent of a military person or the dependents of any other person subject to military law, the customary permission of the next of kin should be secured. An exception to this procedure may be made in cases of foul play or suspected foul play where the next of kin may be under suspicion therefor.

A post mortem examination merely to substantiate the original diagnosis or determine the true cause of death in the case of civilians dying under ordinary circumstances will not as a rule be made in Army medical facilities of this command. The cause of death entered on the death certificate is the medical officer's professional opinion and there is no legal requirement that it be absolutely factual and substantiated by autopsy findings.

V. Physical Examination re: National Service Life Insurance

The following information was received from the Department of the Army, Washington, D.C., relative to the physical examination required for individuals making application for National Service Life Insurance:

"The Administrator of Veterans Affairs has authorized acceptance of modified evidence to show insurability in connection with applications for National Service Life Insurance submitted by military personnel in the towns or alerted for duty in such theater, where it is impracticable to make complete physical examination. Up to 1 October 1950, the following certification to be made by a medical officer will be accepted in lieu of a complete physical examination: 'I have inspected this applicant and based upon his duty status, his appearance and his answers to questions on Part II of this form, it is my opinion that he is free of any disease or residual thereof, or any disability or infirmity or abnormality or any condition which might affect the longevity of the applicant, and is in good health'. Certificate should be typed or stamped in Item 26, Part 3, VA Form 9-350 (A) and signed by a medical officer. As to persons in actual combat area, above certificate may be executed by the applicants Commanding Officer when conditions preclude its execution by a medical officer."

VI. Temporary Dental Requirements for Enlistment and Induction

The following information was received from the Department of the Army, D.C., relative to temporary dental requirements for enlistment and induction:



"Reference paragraphs 5, 33 and 34, AR 40-115. Temporary dental requirement for acceptance for enlistment and induction will be minimum of 4 serviceable vital masticating teeth (bicuspids and molar) above, and 4 below serviceably opposed, also 4 serviceable vital incisor teeth (incisors and cuspids) above, and 4 below, serviceably opposed. Teeth which have been replaced by artificial teeth attached to dentures or bridges and teeth which have satisfactory fillings in root canals will be considered as serviceable vital teeth, when history and clinical appearance clearly warrant such assumption. All applicants for enlistment and registrants for induction who do not meet above minimum dental standards will be classified as physically unfit by reason of remediable defect under provisions of paragraph 5 C, AR 40-115 and deferred for military service. Cause of deferment will be entered in remarks (21, DD Form 47, record OK induction, quoting this message and paragraph 5 C, AR 40-115, as authorized). Above minimum dental standards will apply only for initial enlistment or induction but will not apply for reenlistment, WCL 31745, 8 Oct 48 and WCL 29588, 15 Dec 48, respectively."

VII. Combat Neuropsychiatry

The Department of the Army has published Training Circular No. 6 on the latest planning for the management and treatment of neuropsychiatric casualties in combat. The circular is based on experience in the North African and Mediterranean theaters, covered in the "Combat Psychiatry" supplemental number of the Bulletin of the U. S. Army Medical Department, published last November.

VIII. Clinical Psychology Intern Program at Walter Reed Hospital

Walter Reed Hospital's first senior clinical psychology intern training program began 1 July. The program, first of its type, consists of 3,000 hours on-the-job training. Its purpose is to fill existing vacancies for clinical psychologists in the Regular Army. Students who are in their third year of graduate work in psychology will be placed on active duty as second lieutenants in the Medical Service Corps. After completing the course at Walter Reed, they will return to their universities as second lieutenants on active duty. Upon receiving the PhD degree, they will be offered commissions as first lieutenants.

IX. New Dental Courses Scheduled

A course in advanced dentistry for Regular Army officers will begin 25 August at the Army Medical Research and Graduate School, Washington, D.C. A dental service operations and administration course for officers of the reserve components is scheduled to start on 16 October.

X. Conference on Medical Research



Progress of medical research in the Armed Forces was discussed at a two-day session on military medicine and surgery held in San Francisco.

The meeting of military medical leaders, sponsored by the American Medical Association, was in connection with the AMA convention held in California this summer. The talk on medical research and development was made by Major General George E. Armstrong, Deputy Surgeon General of the Army.

A paper on "Military Medicine and Its Relation to American Medicine" was presented by Dr. Richard L. Meiling, Director of Medical Services, OSD, and discussed by Rear Adm. Clifford A. Swanson, Navy Surgeon General; Major General Harry G. Armstrong, Air Force Surgeon General; and Major General Armstrong of the Army.

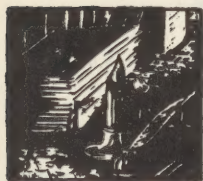
Other papers read included a number by prominent civilian authorities. One member of the latter group - Dr. Norvin C. Kiefer of Washington, D.C., discussed "Civilian Defense Planning."

XI. Hepatic Center Moved to Army Medical Center

An Army facility which studies the causes of liver disorders has been transferred from Valley Forge General Hospital, Phoenixville, Pa., to the Army Medical Center, Washington, D.C.

The function of the facility, known as the Army Hepatic and Metabolic Center, is to perform research on liver ailments, with particular attention to the prevention or treatment of infectious hepatitis. This disease, sometimes called "catarrhal jaundice," affected some 55,000 military personnel during World War II.

XII. Recent Department of the Army and FEC Publications



AR 145-8, 24 May 50 - Joint Army-Air Force Agreement Relative to ROTC Units of Medical Department

AR 35-1110, 25 May 50 - Creditable Service for Basic Pay while on Active Duty. Par 8: Retention in Service for Medical Care or Hospitalization. Par 16: Service in Veterinary Corps

AR 35-1630, 13 Jun 50, C-1 - Pay and Allowances of Contract Surgeons

AR 40-508, 19 Jun 50 - Medical Care for Nationals of Foreign Governments in Army Medical Treatment Facilities

AR 40-1080, 19 Jun 50, C-2 - Current Statistical Health Reports, Tables and Charts

AR 40-1025, 19 Jun 50, C-6 - Records and Reports of Sick and Wounded

AR 40-405, 21 Jun 50 - Army Medical Library

AR 40-50, 27 Jun 50 - Army Health Nursing Service
 DA CIR 32, 5 Jun 50 - Sec III. ANC and WMSC - Appointments
 SR 605-105-1, 19 May 50 - Personnel Classification for Officers. Sec IV. Classification of Medical Department Officers
 SR 725-15-1, 25 May 50 - Issue of Supplies and Equipment: Regulated Items. Par 5(c) - Medical Department
 SR 40-410-10, 8 Jun 50 - Central Facilities Provided for Department of Defense by Armed Forces Institute of Pathology
 SR 600-450-1, 14 Jun 50, C-2 - Physical Evaluation; Hospitalization; Disposition; Separation for Physical Reasons
 SR 40-506-12, 15 Jun 50 - Medical Attendance in Medical Treatment Facilities of Federal Agencies Outside Department of Defense
 SR 615-360-1, 20 Jun 50 - Discharge Procedures and Preparation of Separation Forms. Sec II. Terminal Physical Examination
 RT 8-571-20, 4 May 50 - Mobile Army Surgical Hospital
 RT 8-317-20, 25 May 50 - Medical Ambulance Company (Separate) (Active Army)
 RT 8-581-20, 25 May 50 - Evacuation Hospital, Semi-mobile (Active Army)
 T/O&E 8-500, 2 Mar 50 - Medical Service Organization
 T/O&E 8-18N, 2 May 50, C-2 - Clearing Company, Medical Battalion
 T/O&E 8-117, 12 May 50 - Preventive Medicine Company
 T/O&E 8-564, 18 May 50 - Station Hospital, 200-bed, Communications Zone

PART II

TECHNICAL

<u>SUBJECT</u>	<u>SECTION</u>	<u>PAGE</u>
A Clinical Evaluation of Tetraethylthiuramdisulphide (Antabuse) in the Treatment of Problem Drinkers.	XIII	5
Diagnostic Titles for Dental Conditions	XIV	9
Current Military Routine Immunization Requirements for Japan and Korea.	Center Sheet	
An Unusual Case of Poliomyelitis.	XV	15
Routine Care of Burns in the Physical Therapy Department.	XVI	16

XIII. A Clinical Evaluation of Tetraethylthiuramdisulphide (Antabuse) in the Treatment of Problem Drinkers*



Since 1948 when several Danish workers first reported on the sensitizing effect of tetraethylthiuramdisulphide (Antabuse) to ethyl alcohol, several reports have appeared in the literature describing its therapeutic efficacy in problem drinkers. (1, 2, 3, 4.) The drug is still classified as a "new drug" under the Federal Food and Drug Act and is not yet available for prescription use, since the indications, contraindications and complications (1, 8) of the medication have not yet been definitely established. The purpose of the present investigation was to study its psychologic, pharmacologic and therapeutic effects and to determine if it was a drug

safe enough for general use.

PROCEDURE

Selection of Patients:

Since April, 1949, 100 patients have been studied, 84 of these on an outpatient basis and 16

*Authors: Karl M. Bowman, M.D.; Alexander Simon, M.D.; C.H. Hine, M.D. (by invitation), E.A. Macklin, M.S. (by invitation), G.H. Crook, Ph.D. (by invitation), N. Burbridge, M.D. (by invitation), Karl Hanson, M.D. (by invitation)

From The Langley Porter Clinic and the Divisions of Psychiatry and Pharmacology of the University of California Medical School, San Francisco, California.

on an inpatient basis. Ten of the inpatients came from a State hospital on alcoholic commitment as volunteers for a study of cerebral blood flow during the alcohol-Antabuse reaction. Approximately half of the patients were self-referral to the Clinic, the remainder having been referred by a spouse, physician, agency, employer or other patients under treatment. Twenty-five patients, in addition to the 100 actually interviewed, were given appointments by phone but failed to keep them. All of the patients were from the middle social group except for two from the upper lower class. Eight were or had been in professional occupations. The occupational spread below this level showed a fair sampling for an urban population of clerical, skilled and semi-skilled workers and salesmen. Only two persons came directly from "Skid Row" and neither of these was interested in a treatment so "inconvenient" as Antabuse therapy. The range of the group was 25 to 67 years with median age of 41. There were 77 males and 23 females. There was no restriction as to whether the patient was considered to have a good or poor prognosis. Only two patients were not accepted for treatment because of physical disease. One of these had had a recent myocardial infarction and the other suffered from diabetes mellitus.

Preliminary Studies:

The first contact with the patient was made by an admitting psychiatric social worker. Following this, the alcohol history was obtained from him by the psychiatrist and a general impression of personality and motivation for treatment was formed. The treatment program was explained to the patient frankly with emphasis on the fact that he could not indulge in drinking without developing extremely unpleasant symptoms. Sixteen of the total of 100 patients decided at this point or during the period of preliminary study that they could not devote the necessary time to the treatment program outlined or that they wanted to try it again on their own or that they were uninterested in a treatment that would not permit some social drinking. While waiting for completion of their studies, the patients tended to go on just one last spree before having to remain sober if the studies were not completed in one week. Such an occurrence caused extreme disappointment to wives and families. In fact, two women left their husbands at this point, but those two men have become "model patients" since beginning medication and have been rejoined by their wives.

Preliminary studies of those who were interested in following the treatment included an average of five hours of psychiatric interviews in which the patient's personality was evaluated, particularly from the viewpoint of familial, social, occupational and economic background and present motivation for treatment. A Minnesota Multiphasic Personality Inventory done on each patient after the fourth month of the program was studied by the psychologist (G.H.C.). These studies were done with the hope that they might provide information that would make possible a reliable prediction as to the likelihood of success of treatment. Further studies included physical, neurological and psychiatric examinations. Numerous evidences of minor personal neglect were found in these patients. Only two patients showed signs of alcoholic peripheral neuritis. Enlarged livers were commonly palpated but tests did not show evidence of abnormal function. Laboratory studies included a complete blood count, blood serology, urinalysis, cephalin flocculation test for liver function, X-ray of the chest and an electrocardiogram. Other tests such as blood sugar determination, electro-encephalograms and further liver function tests were done when indicated.

Method of Drug Administration:

If no physical contraindication to treatment was found, medication was usually started on the fifth day of observation with 1.0 gram of Antabuse by mouth, 1.0 gram the next day, 0.75 gram the third and fourth days, and 0.5 gram the fifth day. The patient was advised that the daily dose be taken in the morning and under the observation of another person regularly so that it was not "forgotten." On the fifth day of medication the first trial with alcohol was made in the hospital. The patient was given the beverage of his choice in an amount to contain alcohol equivalent to that in 0.5 ml. of 90 proof whiskey per kilogram of body weight. In the patient of average weight this amounted to approximately what would be contained in a drink at a public bar. The patient was observed for reactions for 2 hours, or longer in the event of a severe reaction. Signs and symptoms were regularly recorded throughout the testing period. In Table I (page 7) are shown the more frequently observed symptoms and signs with the time periods during which they usually occur. Figure 1 (page 7) shows the symptoms and signs observed in a moderately severe reaction in one patient and is rather typical of the group. The graphs of blood pressure and pulse show an early rise followed by a marked drop in the blood pressure. The principal symptoms and signs observed in this patient are noted in the upper part of the graph and duration is indicated by the length of the line beneath. An early tetrad of blushing, throbbing, conjunctival injection and heat in the face which began within four minutes of the ingestion of alcohol, was of severe degree as indicated by the three plus sign and lasted for 35 minutes. Dizziness and perspiration were of moderate degree and short duration. Mild chest pain lasted for fifteen minutes. Hangover, nausea and sleepiness were all of moderate degree. The blood alcohol and acetaldehyde taken at intervals through the first hour are recorded on the lower part of the figure. Both reached a peak in twenty minutes with an alcohol level of 24 milligrams percent and a blood acetaldehyde of 1290 micrograms percent. A second trial was performed one week later; generally half of the amount of alcoholic

TABLE 1	ANTABUSE ALCOHOL REACTION	
5 - 20 min.	20 - 50 min.	50 min. to 6 hrs.
Blushing face	Headache	Hangover
Conjunctival injection	Dyspnea	Sleepiness
Feeling of heat in face	Generally indisposed (hangover)	
Tachycardia	Pallor	
	Dizziness	
	Nausea and vomiting	
	Chest pain	

beverage administered on the first trial was given. A maintenance dose of Antabuse was determined on the basis of the severity of reaction to these trials. The dose of Antabuse was considered sufficient when the reaction resulting from the ingestion of one drink would discourage the patient from taking a second. A few more patients required 0.5 gram of Antabuse daily than required 0.25 gram daily and only a few needed 1.0 gram daily. It was planned to keep each patient on regular Antabuse dosage for six months, during which period he was seen at intervals of two to four weeks. At the end of this time the treatment was discussed with the patient and he was asked if he felt that matters were well enough in hand so that he could get along taking Antabuse only when he felt that there was a likelihood of his "falling off the wagon."

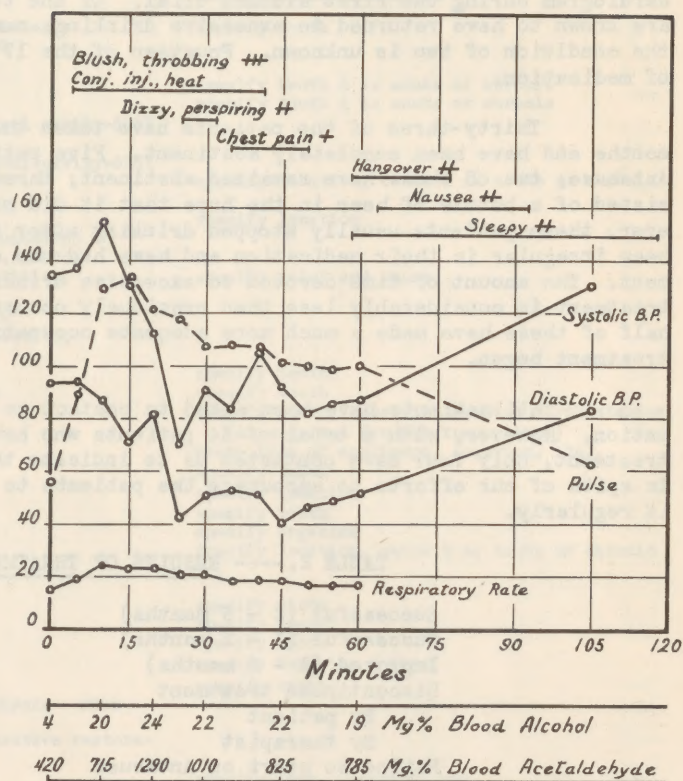
The Role of Psychotherapy:

Five patients who wished to discuss emotional problems were given as much time as possible to do so, and in general this was one hour per week. An additional twelve have been seen occasionally to discuss specific problems which arose during the course of treatment. The additional benefit from such management has been difficult to evaluate. No specific effort to interest the patients in psychotherapy, individual or group, was made as it was planned to compare them with another group in whom intensive psychotherapy will be undertaken in conjunction with Antabuse treatment. However, the knowledge that this treatment was a special study, and that many laboratory procedures were being carried out by numerous people during the alcohol trials must have had strong suggestive therapeutic effect on the patients. It is of interest to note that prior to the use of Antabuse in treatment, the problem drinker, when offered psychotherapeutic help, commonly pleaded, "But haven't you got a pill that will cure me?" Now that we have a "pill" to offer, he asks, "But what about my problems that make me drink? Isn't anything going to be done about them?" However, after these patients are started on treatment, the great majority of them deny that they have any emotional problems.

Pharmacologic Studies:

Certain observations relative to the pharmacologic studies completed on 34 of the patients are worthy of note. (7) An increased alcohol level in the blood is necessary for a reaction to occur. Three of the patients showed no significant rise in blood alcohol at the time of the first alcohol test and no observable clinical reaction. The intensity of the clinical reaction, however, is not directly dependent on the height of the alcohol level up to 49 milligrams percent. Levels higher than this have not been observed resulting from a single drink. Neither is the intensity of the clinical reaction necessarily dependent upon the height of the blood acetaldehyde levels obtained from the doses of alcohol given. In three patients there was increasing sensitivity to Antabuse between the fifth and 12th

FIGURE 1



day after the medication was begun, as evidenced by a significantly higher blood acetaldehyde on the 2nd trial with a smaller dose of alcohol. Whether the increased blood level of acetaldehyde during the Antabuse-alcohol reaction is the cause of the symptoms displayed still remains to be proven. (5, 6)

THERAPEUTIC RESULTS

Of the total of 100 patients, 71 were started on medication longer than two months ago. Eleven patients have discontinued treatment of their own choice after ten days' to three months' medication, one of these by becoming acutely depressed and taking his own life, three because they were not interested in going on with the treatment as they had entered into it only on the insistence of relatives; one because he complained that dizziness and fatigue were too unpleasant; three (psychotic patients) because they were no longer interested in the treatment; and three who discontinued for reasons unknown. Medication was discontinued by the therapist in the first two weeks in six cases; two because acute depressive psychotic symptoms developed, one because of inability to discontinue paraldehyde, one because of a myocardial infarction, and two because of evidence of coronary insufficiency noted in the electrocardiogram during the first alcohol trial. Of the total of 17 patients who discontinued treatment, 12 are known to have returned to excessive drinking; one is dead; two are reported to be abstinent; and the condition of two is unknown. Fourteen of the 17 discontinued treatment during the first two months of medication.

Thirty-three of the patients have taken their medication regularly for periods of two to six months and have been completely abstinent. Five patients have been irregular in their daily dose of Antabuse; two of these have remained abstinent; three have had a single drink. This drinking has consisted of a bottle of beer in the hope that it did not contain enough alcohol to cause a reaction. However, these patients usually stopped drinking after no more than a half bottle. Sixteen patients have been irregular in their medication and have had one or more alcoholic sprees but have returned to treatment. The amount of time devoted to excessive drinking in each of these patients since they have begun treatment is considerably less than previously occurred. In spite of occasional lapses from sobriety, half of these have made a much more adequate occupational and family adjustment than they did before treatment began.

All patients have been asked to contact us at any time that they feel like discontinuing medication. However, with a total of 34 patients who have either temporarily or permanently discontinued treatment, only four have contacted us to indicate that a lapse from Antabuse medication was imminent. In spite of our efforts to encourage the patients to continue the drug, three of the four failed to take it regularly.

TABLE 2.---- RESULTS OF TREATMENT OF 100 PROBLEM DRINKERS

Successful (2 - 6 months)		38
Successful (1 - 2 months)		11
Improved (1 - 6 months)		16
Discontinued treatment		17
By patient	11	
By therapist	6	
Failed to start on Antabuse		18
Therapist's decision	2	
Patient failed to complete study	16	
	TOTAL	100

PROGNOSTIC FACTORS

Data derived from two sources have been used in an attempt to determine the predictability of success or failure with this treatment: (1) the Minnesota Multiphasic Personality Inventory and (2) psychological and situational information obtained from the patient during preliminary study.

For purpose of analysis on the Multiphasic Personality Inventory the treated cases were divided into three groups: successful, irregular, and failure patients. Figure 2 (page 13) is a composite graph of average findings on 33 males.

All scores for the Successful group are well within the normal range. The Failure group shows generally much more evidence of psychopathology. The Irregular group falls between the other two for most scales. The only significant departure from this is on the hysteria scale.

All three groups show a primary peak on the psychopathic scale with a secondary peak on depres-

(CONTINUED ON PAGE 13)

XIV. Diagnostic Titles for Dental Conditions - Colonel Harold G. Ott, DC, Dental Surgeon, GHQ, FEC

The following alphabetical list of diseases, abnormalities and injuries which are of particular interest to dental officers has been extracted from SR 40-1025-1 (Statistical Classification and Basic Diagnostic Nomenclature) dated 1 April 1949 and is published for the convenience of all concerned. Wherever numerous specific titles appear in the original text under general classes of conditions such as neoplasma, wounds, etc., only an appropriate reference is given for the particular classified section in which such terms appear. Certain other entities which are not frequently encountered have also been omitted from this listing and the alphabetical index of the original text should be consulted for titles and requirements in reporting and recording such cases. Method of reporting conditions not listed in basic text (SR 40-1025-1) is contained in paragraph 1 d, thereof.

Explanation of Listing:

Column 1: Identifying diagnostic number

Column 2: Diagnostic Title to be used verbatim: (Titles preceded by an asterisk (*) comprise the list of Class XII items (Dental Diseases and Conditions) as published in original text.) Unnumbered titles are listed only for convenience in utilizing proper nomenclature. The letters n.e.c. (not else where classified) which follow some titles indicate that other titles covering specific entities of the same general nature are listed elsewhere in the text

Column 3: Explanatory notes, references or synonyms.

Column 4: Qualifying information which is required in addition to specific diagnostic titles (Column 2): When specific data such as "cause" is called for and same is unknown or undetermined it should be so stated. Anatomical sites, when reported, should state whether right, left or bilateral, whenever applicable.

(1) NO.	(2) DIAGNOSTIC TITLE	(3) REMARKS	(4) QUALIFYING DATA REQUIRED
5354	*Abrasion, tooth	wearing away by abrasive substance	specify tooth
	Abscess, dentoalveolar, acute	see abscess, periapical-5302	
5311	*Abscess, parietal		specify tooth & as acute or chronic
5302	*Abscess, periapical		specify tooth & as acute or chronic
	Abscess, pericoronal	see Abscess, soft tissue, oral cavity-5387	
	Abscess, periodontal	see Abscess, parietal-5311	
	Abscess, pterygomandibular	see Abscess, soft tissue, oral cavity-5387	
5387	Abscess, soft tissue, oral cavity		specify location, cause & as acute or chronic
2100	Ameloblastoma	Adamantanoma	specify location
	Angina, Ludwig's	see Cellulitis, floor of mouth-5385	
	Angina, Vincent's	see Vincent's Infection n.e.c.-0701	
7389	Ankylosis	see Temporomandibular articulation, abnormality of	specify joint and cause
	Aphthae	see Stomatitis, aphthous-5370	
	Arthritis	see Temporomandibular articulation, abnormality of	
5303	*Atrophy, pulp		specify tooth
5355	*Attrition, tooth	wearing away by mastication	specify tooth
8272	Avulsion, tooth		specify tooth, causative agent & circumstances (as required for all traumatisms)
9086	Bridge, defective		state type of appliance, location, etc.
5350	*Calculus, dental		specify tooth
5381	Calculus, salivary gland/duct		specify location
5300	*Caries, dental		specify tooth
5385	Cellulitis, floor of	Ludwig's Angina	specify organism
5386	Cellulitis, oral structures, n.e.c.		specify location, cause & as acute or chronic
7550	Cleft palate		
9086	Crown, defective		specify tooth
5347	*Cyst, follicular		specify tooth
5323	*Cyst, radicular		specify tooth
2116	Cyst, n.e.c.		specify location & type
Xilxy	Deciduous tooth		specify tooth
	Defective bridge, crown or denture	see Fitting of dental prosthesis - 9086	
	Defective filling	see Replacement, dental operative restoration-9087	
9086	Denture, defective		specify type, location, etc.
5346	*Diastema, dental		specify location
	Dislocation, joint	see Temporomandibular articulation, abnormality of	
5343	*Displacement, tooth traumatic		specify tooth
	Dry socket	see Infection, alveolus-5325	
5339	*Edentulous mandible		
5340	*Edentulous maxilla		
	Epulis	see Fibroma, periodontal membrane-2136	
5356	*Erosion, tooth		specify tooth & causative agent
	Erupting tooth	see Non-functional tooth-5341	
5301	*Exposure, pulp		specify tooth
2136	Fibroma, periodontal membrane	Epulis	specify location
4080	Fistula, oral, maxillary sinus		specify location & cause
9086	Fitting of dental prosthesis		specify as replacement for defective prosthesis stating specific nature of appliance, location, etc
9087	Filling, defective		specify tooth
9089	Fitting of prosthesis, n.e.c.		specify
5338	*Fluorosis, dental	mottled enamel	
8130	Fracture, alveolar process	report when appropriate as complication of surgical treatment, n.e.c.-8960	specify complication & condition treated
	Fracture, maxillo-facial bones	see title numbers 8000 to 8160	specify bone, site & report specific traumatism along with causative agent, circumstance of injury & other required data
8712	Fracture, tooth	Odontoclasia	specify tooth, causative agent, & circumstance (as required for all traumatisms)
	Gangrene, pulp	see Necrosis, pulp-5303	

(CONTINUED ON PAGE 12)

CURRENT MILITARY ROUTINE IMMUNIZATION REQUIREMENTS

FOR JAPAN AND KOREA

Current military routine immunization requirements for duty in Japan and Korea include vaccinations against smallpox; typhoid-paratyphoid and typhus fever; cholera vaccination; and tetanus immunization. The only special immunization required at present is Japanese B encephalitis.

The following information as contained in paragraph 3, GHQ, FEC Circular 9, February 1950; CINCFE messages dated 14 March 50 and 18 July 50, respectively, and TB MED 114, February 1947 and change 1, May 1949, regarding dosage and procedures relative to the above immunizations is furnished as a ready reference for all Medical Department personnel concerned.

IMMUNIZATION	STIMULATING DOSES	SEASON	DOSAGE AND PROCEDURES
Smallpox	Annually	On or about 1 November or at other times when indicated (for 1950 revaccination is to be accomplished as soon as possible after 1 Sept regardless of previous date of vaccination)	The contents of 1 capillary of vaccine is deposited on the cleansed area and the vaccination is accomplished by the multiple pressure method. This entails the holding of the needle parallel to the skin and pressing the side of the needle point through the drop of vaccine about 30 times. The motion should be perpendicular to the skin and just enough pressure should be applied so that the elasticity of the skin will pull a small bit of the epidermis over the point of the needle at each pressure. The total area of the vaccination should not be greater than 1/8 inch in diameter and should not be deep enough to result in bleeding. No dressing should be applied to the vaccinated area. Determination of the type of reaction, and its recording on the immunization register are imperative. (1) The initial vaccination consists of a subcutaneous injection of three 0.5 cc doses of the triple vaccine administered at intervals of 7 - 28 days. In order to insure accuracy, a syringe of 6-cc capacity or less will be used. Care will be taken to make the injections into the superficial subcutaneous tissue. (2) Administration of stimulating doses is accomplished by - (a) The subcutaneous administration of 0.5 cc of the triple vaccine annually, or, (b) Intracutaneous administration of 0.1 cc of the triple vaccine annually. This procedure may be used as an alternate if accomplished by a medical officer who is experienced in the technique of intracutaneous administration.
Typhoid and Paratyphoid	Annually	On or about 1 May	(1) The initial vaccination consists of 2 injections of the vaccine, 1.0 cc each, administered subcutaneously at intervals of from 7 - 10 days. (2) The stimulating dose is 1.0 cc administered at yearly intervals. In the known presence of danger from typhus single stimulating doses of 1.0 cc each may be given at 4 - 6 months intervals when prescribed by the major command surgeon. (1) <i>Initial immunization: This consists of a series of 3 subcutaneous injections of tetanus toxoid (plain), 1.0 cc each, administered with intervals of 3 - 4 weeks between doses. The "initial immunization" produces an active immunity to tetanus. Subsequent reinforcement of this immunity is accomplished by the administration of a stimulating or recall dose of toxoid. The prophylactic use of tetanus antitoxin is therefore unnecessary after the completion of the initial immunization series. Instead, an emergency stimulating dose of tetanus toxoid should be administered as indicated below.</i> (2) Routine stimulating dose: A single stimulating dose of 1.0 cc of tetanus toxoid is injected subcutaneously approximately 1 year after the initial series, every 4 years following the last stimulating dose, and as indicated in (3) below. (3) Emergency stimulating dose: In addition to the above initial and stimulating immunization, an emergency stimulating dose should be administered to those indicated below as soon as practicable after injury (preferably within 24 hours) when deemed advisable by the responsible medical officer: (a) Individuals who incur wounds or severe burns on the battlefield. (b) Patients undergoing secondary operations or manipulations of old wounds. (c) Others who incur punctured or lacerated wounds, severe burns, or other conditions which might be complicated by the introduction of Cl. tetani into the tissues. (4) Alternate procedure when alum precipitate of tetanus toxoid is used: (a) Initial immunization: Initial immunization consists of 2 intramuscular injections of tetanus toxoid alum precipitated, 0.5 cc each injection, at intervals of not less than 4 or more than 8 weeks. (b) Routine stimulating dose: A single stimulating dose of 1/2 cc of tetanus toxoid alum precipitated is injected intramuscularly approximately 1 year after the initial series, every 4 years following the last stimulating dose, and as indicated in (3)(b) above.
Typhus	Annually	On or about 1 November (for 1950 the annual stimulation dose is to be administered as soon as possible as possible)	(1) The initial vaccination consists of 2 injections of the vaccine, 1.0 cc each, administered subcutaneously at intervals of from 7 - 10 days. (2) The stimulating dose is 1.0 cc administered at yearly intervals. In the known presence of danger from typhus single stimulating doses of 1.0 cc each may be given at 4 - 6 months intervals when prescribed by the major command surgeon.
Tetanus	1 year after initial series; every 4 years following last stimulating dose and upon incurrence of wounds or burns	Does not apply	(1) <i>Initial immunization: This consists of a series of 3 subcutaneous injections of tetanus toxoid (plain), 1.0 cc each, administered with intervals of 3 - 4 weeks between doses. The "initial immunization" produces an active immunity to tetanus. Subsequent reinforcement of this immunity is accomplished by the administration of a stimulating or recall dose of toxoid. The prophylactic use of tetanus antitoxin is therefore unnecessary after the completion of the initial immunization series. Instead, an emergency stimulating dose of tetanus toxoid should be administered as indicated below.</i> (2) Routine stimulating dose: A single stimulating dose of 1.0 cc of tetanus toxoid is injected subcutaneously approximately 1 year after the initial series, every 4 years following the last stimulating dose, and as indicated in (3) below. (3) Emergency stimulating dose: In addition to the above initial and stimulating immunization, an emergency stimulating dose should be administered to those indicated below as soon as practicable after injury (preferably within 24 hours) when deemed advisable by the responsible medical officer: (a) Individuals who incur wounds or severe burns on the battlefield. (b) Patients undergoing secondary operations or manipulations of old wounds. (c) Others who incur punctured or lacerated wounds, severe burns, or other conditions which might be complicated by the introduction of Cl. tetani into the tissues. (4) Alternate procedure when alum precipitate of tetanus toxoid is used: (a) Initial immunization: Initial immunization consists of 2 intramuscular injections of tetanus toxoid alum precipitated, 0.5 cc each injection, at intervals of not less than 4 or more than 8 weeks. (b) Routine stimulating dose: A single stimulating dose of 1/2 cc of tetanus toxoid alum precipitated is injected intramuscularly approximately 1 year after the initial series, every 4 years following the last stimulating dose, and as indicated in (3)(b) above.
Cholera	Basic series only with no stimulating dose required at present	Does not apply	(1) The initial vaccination consists of 2 subcutaneous injections of cholera vaccine at an interval of from 7 - 10 days. The first dose is 0.5 and the second dose 1.0 cc. (2) Stimulating doses of 1.0 cc each may be given at 4 - 6 month intervals in the known presence of danger from cholera when prescribed by the major command surgeon.
Japanese B Encephalitis	Annually, after initial series	Not later than 15 May south of and including Osaka and Kyoto and in remainder of Japan and Korea o/a 1 June. Ind. arriving from ZI will be given Jap B en vaccination	Initial vaccination consists of 3 doses of 1.0 cc each. The second dose is normally given one week after the first and the third one month after the first. For those arriving after 15 June the 3 doses are given at intervals of 2-4 days between doses. For individuals who have previously received an initial series, an annual stimulating dose of 1.0 cc is all that is required.

(1) NO.	(2) DIAGNOSTIC TITLE	(3) REMARKS	(4) QUALIFYING DATA REQUIRED
	Gingivitis, heavy metals	see Poisoning, chronic, n.e.c.-8851	
	Gingivitis, necrotizing ulcerative	see Vincent's infection, oral-0700	
	Gingivitis, Vincent's	see Vincent's infection, oral-0700	
5320	*Gingivitis, n.e.c.	not to include Vincent's infection, oral-0700	specific type
5383	Glossitis		state cause & as acute or chronic
7551	Harelip		specify as complete or incomplete
5352	*Hemorrhage from alveolus		specify location & cause
0960	Herpes simplex		specify location
5345	*Hypercementosis		specify tooth
5304	*Hyperemia, pulp		specify tooth
5324	*Hyperplasia, gingiva		specify type
5358	*Hypersensitive dentin		specify tooth
5388	Hypertrophied frenum, labial		
5351	*Hypoplasia, enamel		
5333	*Impaction, tooth		specify tooth
5325	*Infection, alveolus	dry socket	specify location
5360	*Infection, dental residual Inflammation, salivary gland	see Sialadenitis-5380	specify location
5384	Leukoplakia buccalis		specify location
7114	Leukoplakia, n.e.c.	not to include Leukoplakia buccalis	specify location
7070	Lichen planus		
5361	*Malformation, alveolar ridge		specify location
5337	*Malformation, congenital, tooth		specify tooth
5331	*Malocclusion, n.e.c.	not to include Occlusion, traumatic-5330	
5344	*Malposition, tooth erupted		specify tooth
7340	Malunion of fracture	see Nonunion-7342	specify bone
5342	*Missing tooth, n.e.c.	not to include Edentulous mandible-5339; Edentulous maxilla-5340	
1343	Moniliasis	to include Thrush	specify location
	Mottled enamel	see Fluorosis, dental-5338	
5326	*Necrosis, alveolar		specify location & cause
5303	*Necrosis, pulp	Gangrene of pulp	specify tooth
	Neoplasms	see title numbers 1400 to 2184	report as specific type of benign or malignant neoplasm, including location & other details indicated in the classified section
3610	Neuralgia, trigeminal		specify division of nerve
3660	Neuralgia, n.e.c.		specify nerve and cause
3601	Neuropathy, facial nerve	Bell's palsy	state cause
5306	*Nodule, pulp		specify tooth
5341	*Nonfunctional tooth		specify tooth
7342	Nonunion of fracture		specify bone
5330	*Occlusion, traumatic		
5349	*Odontalgia, cause undetermined		
	Odontoclasia	see Fracture tooth-8712	
2160	Odontoma		specify location
	Odontorrhagia	see Hemorrhage from alveolus-5352	
7301	Osteomyelitis, acute		specify bone, organism & as hemotogenous or traumatic
7302	Osteomyelitis, chronic		specify bone, organism & as hemotogenous or traumatic
5327	*Pericoronitis		specify tooth
5321	*Peridontitis	inflammation of periodontium	specify location
5322	*Periodontoclasia	inflammatory destruction of periodontium	
5359	*Periodontosis	non-inflammatory degeneration of periodontium	specify location
7160	Perleche		
5307	*Pulpitis		specify tooth
5308	*Pulpless tooth		specify tooth
5382	Ranula		
9087	Replacement, dental opera- tive restoration	report as defective filling, etc., under title number 9087	specify nature of replacement
5357	*Root, tooth, retained		specify tooth
5353	*Sequestrum, maxillo-facial bones		specify location
5380	Sialadenitis	Adenitis, salivary gland or duct	specify gland or duct, cause & as acute or chronic
5370	Stomatitis, aphthous		
5371	Stomatitis, gangrenous	Noma	specify location
5372	Stomatitis, n.e.c.	not to include Vincent's infection-0700, or Moniliasis-1343	
5336	*Supernumerary tooth		specify location
	Temporomandibular articula- tion, abnormality of	list when appropriate as: Ankylosis-7389; Arthritis-7240-7200-7220-7250; Dislocation- 8301-8302-7392. See classified section for reporting details	
	Thrush	see Moniliasis-1343	
	Tic douloureux	see Neuralgia, trigeminal-3610	
2127	Torus mandibularis		specify bone & cause
2128	Torus palatinus		specify bone & cause
	Trench mouth	see Vincent's infection-0700	
7807	Trismus		
	Tumor	see Neoplasms	
5373	Ulcer, mouth, traumatic		specify location & cause
5374	Ulcer, mouth, n.e.c.		specify location & cause
5334	*Unerupted tooth	not impacted	specify tooth
	Union of fracture, faulty	see Malunion-7340, or Nonunion-7342	
0700	Vincent's infection, oral	necrotizing, ulcerative gingivitis, etc.	
	Wound of mouth	see title numbers 8200 to 8255	report specific traumatism, circumstances, & other details required by classified section
XII	*Other diseases & conditions of this Class	see par 1 d, SR 40-1025-1 for conditions not listed	state title

sion. The most outstanding differences between the groups are the significantly higher elevation of the Failure group at the psychotic end of the profile, and the F minus K validating scores.

Findings reported here from the information obtained in interviews are limited to those which appear to be of prognostic importance for response to Antabuse treatment. Forty-one male patients are represented in the following summary.

Unexpectedly it was found that relatively more Failures than Successes or Irregulars were referred for treatment by themselves or their family members. The other sources which account for more than 85% of referrals in the Successful and Irregular groups are scattered amongst more impersonal and higher prestige sources: friends, employers, personal physicians, social agencies and State or other hospitals.

A most interesting relationship is found in the sibling patterns. The Successful patients have a preponderance of brothers, while there is a still greater preponderance of sisters among the Failures -- a difference which closely approaches significance at the 5% level.

Reports obtained from the patients concerning the attitudes which their parents had borne toward them during their childhood were classified into categories ranging from "loving, affectionate, companionable, encouraging, helpful," at one end of the scale, to "strict, severe, overly-critical, punitive," at the other. A finding of high reliability (2% level) appeared in descriptions of their mothers' attitudes. Many more "positive" attitudes -- loving, helpful, indulgent, partial toward patient, self-sacrificing, over-protective, were ascribed by the Successful and Irregular patients to their mothers. Conversely, more negative and indifferent attitudes -- possessive, demanding, cold, withdrawn, strict, punitive, hated, and hostile, were reported by the Failures for their mothers.

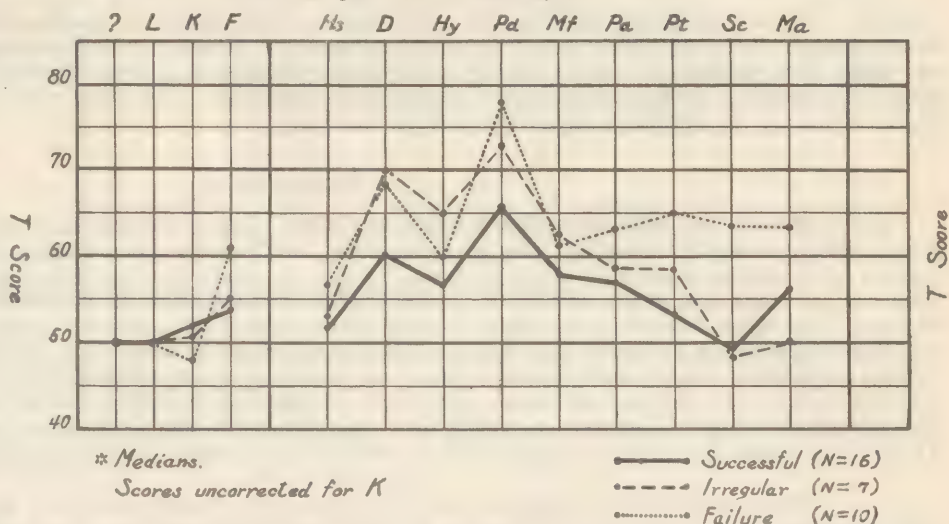
A comparable inquiry into the patient's attitudes toward their parents failed to disclose clear-cut differences, but there is a strong suggestion that Failures held more antagonistic attitudes toward their fathers.

Among the more provocative but less certain data are trends in reports concerning the ways in which his closest relatives (usually wife, occasionally mother) reacts toward him at home. The Failures tend to report more antagonistic, quarrelsome and nagging behavior from their womenfolk during a drinking bout, while the Successes report relatively more loving, accepting, and other positive behavior, and receive more tender care.

An attempt was made to evaluate certain aspects of the patients' subjective feelings and inner lives. Both Successful and Failure groups show a decrease in overall happiness upon entering the long term period of excessive drinking with a sharp rise when entering a drinking bout. This rise is greater for the Failures than for the Successes. More striking still is the plummeting dive which the Failures take during the hangover period; they greatly out-distance the Successful group. Thus it appears that the Failure group get a greater lift out of drinking -- drinking may actually have a greater (momentary) psychological value for them.

All groups show increases in feeling, of depression, anxiety, guilt, worry, pessimism and lack or loss of self-respect since onset of excessive drinking. But the Failures show a markedly greater increase than do the Successes for this long-term period. During the drinking bout the Failures show an appreciably greater decrease in intensity of these feelings, again pointing out the relatively greater subjective gain to be derived from alcohol by the Failures.

FIGURE 2 -- Group Profiles* on the Multiphasic Personality Inventory of 33 males started on Antabuse.



The patients' conscious motivations for treatment were inquired into in regard to (1) internal fears and anticipations of the consequences of continued alcoholism, and (2) external pressures or influences exerted upon him by others, as perceived by the patient.

No stable group differences were found in the number or pattern of internal fears. However, when the external pressures were weighted in terms of recency, the Failures report a significantly greater press from members of their family than do the Successes. This finding fits neatly into the pattern noted as emerging from the patients' family relationships. In other words, pressure from the family fails dismally to effect a higher degree of sobriety.

COMPLICATIONS

One of the male patients who had no prior history of cardiac impairment and in whom all preliminary cardio-vascular examinations were negative, suffered a severe myocardial infarction as a direct result of drinking part of a bottle of ale on the eleventh day of Antabuse medication. He attempted to walk to him home-bound bus line, but became so distressed that he called a taxicab and came to the Clinic. His electrocardiogram taken during the reaction was very abnormal, and two days later showed typical signs of an infarction. Antabuse medication was discontinued in this patient. In two other patients medication was discontinued because of abnormal electrocardiographic findings during the first alcohol trial. In neither of these patients had preliminary study indicated evidence of cardiac disease. The electrocardiograms showed marked T wave changes and a two millimeter depression in the S-T segment in certain leads which were interpreted as definite evidence of localized myocardial ischemia.

There have been sixteen cases of a shock-like state occurring during alcohol trials in which the diastolic blood pressure fell below 50 millimeters of mercury; in two patients for periods of five and ten minutes no blood pressure reading could be obtained. Intravenous ephedrine sulfate was found quite effective in the treatment of this condition. Three times, mild grand mal convulsions were observed, but in only one of these patients had there been any history of a previous convulsion. In this patient later, as well as in two other patients with a convulsive history, continuous electroencephalographic studies were made during an alcohol trial, but in none was the wave pattern made more abnormal during the course of the test.

In ten patients under treatment, definite psychotic reactions have been observed. In six cases this was a severe depressive reaction. One of these patients committed suicide, two made unsuccessful suicidal attempts, and one was preoccupied with ideas of suicide. Three patients developed schizophrenic psychoses which were not evident prior to treatment, and one a paranoid reaction. In one patient transitory manic-like reactions appeared twice. These psychotic reactions are considered to be the probable result of the psychological effects of alcohol withdrawal rather than the direct result of toxic effects of Antabuse.

Early toxic symptoms from Antabuse occurred in almost every patient, but were only of severe degree in 20% of the cases. Sleepiness, gastro-intestinal complaints, fatigue, decreased sexual potency, headache and dizziness occurred in this order of frequency. Most severe symptoms were only of a few days duration, and it was rare to find any side effects of the medication still persisting after two months' treatment. In a few patients, transitory eosinophilia and occasionally an increased total white blood count due primarily to increased lymphocytes in the blood were observed. No harmful effects on blood, kidney or liver have been observed after medication over periods exceeding six months.

SUMMARY

The Antabuse treatment of problem drinkers appears to be of definite value in the medical management of certain patients by significantly reducing the amount of time devoted to excessive drinking over a long period. It is more likely to prove of value in those persons showing no evidence of psychotic trends and lesser degrees of neurotic disposition. There is little evidence to indicate that it will bring about a permanent cure so that Antabuse may be discontinued after six months of ingestion of the drug when given as outlined. It is of utmost importance to recognize that psychotic reactions may occur while the patient is under Antabuse medication, and that serious cardio-vascular accidents may occur should the patient consume alcoholic beverages during the course of treatment.

BIBLIOGRAPHY:

- (1) O. Martensen-Larsen, M.D. - Lancet, 2:1004-1005, December 25, 1948
- (2) Erik Jacobsen, M.S., and O. Martensen-Larsen, M.D. - Jr. American Medical Association, Vol. 139, pp. 918-922, April 2, 1949
- (3) Erik Glud, M.D. - Quarterly Journal of Studies on Alcohol, Vol. 10, No. 2, pp 185-197, September, 1949

- (4) Jens Hald, M.D. and Erik Jacobsen, M.D. - Lancet 2:1001-1004, December 25, 1948
- (5) Jens Hald, M.D. and Erik Jacobsen, M.D. - Acta Pharmacol. 1948, 4, 305-310
- (6) Erling Asmussen, M.D., Jens Hald, M.D., Erik Jacobsen, M.D. and Gunnar Jorgensen, M.D. - Acta Pharmacol. 1948, 4:297-304
- (7) Chas. H. Hine, M.D., H. H. Anderson, M.D., Edward A. Macklin, M.D.(by invitation), Thomas N. Burbridge, M.D.(by invitation), Alexander Simon, M.D.(by invitation), and Karl M. Bowman, M.D.(by invitation). Jr. of Pharm. & Exp. Ther., Vol. 98, No. 1, Jan. 1950
- (8) Robert C. Jones, M.D. - Canadian Medical Association Journal, 60:609-612, June 1949

ACKNOWLEDGMENT:

We wish to express our gratitude to Ayerst, McKenna & Harrison, Limited, for providing the Antabuse used in this study.

XV. An Unusual Case of Poliomyelitis - Major Milton H. Hollander, MC, Chief Communicable Disease Section, Osaka General Hospital, APO 25-5



A case of poliomyelitis occurring out of season and offering difficulty in diagnosis is presented.

Case Report:

Patient was an 18-year old white male who became ill with sore throat on 27 May 1950. The following day he developed fever, malaise, slight generalized headache, had several bouts of vomiting, and noted voice change manifested by hoarseness. Symptoms continued and he was admitted to Osaka General Hospital on 30 May.

Physical examination revealed a well-oriented, well-developed young man with temperature of 101.6 degrees, moderate pharyngitis, and negative Kernig and Brudzinski signs. He had minimal discomfort in the back of the neck with flexion, which he attributed to pain just below the larynx. He had been unable to swallow since the morning following the onset.

Initial impression was that patient had a pharyngitis. After throat culture was taken and routine studies started, he was given intravenous fluids and penicillin, 300,000 units, twice daily. WBC was 11,800 with 74 neutrophils and 22 lymphocytes.

Moderate fever continued the next day. Throat culture revealed no pathogens. Because of failure to improve, streptomycin, one gram daily, was started. Because he was still unable to swallow, it was felt that diphtheria had to be considered, despite the fact that he showed no signs of toxicity and there was no evidence of edema at the base of the neck. Following skin testing, diphtheria anti-toxin was given, 20,000 units intravenously and 40,000 units intramuscularly. This had no apparent effect upon the course of the disease.

A spinal tap was done the following day because of persistent fever, inability to swallow and continued discomfort in the back of the neck on marked flexion. It showed total protein 37 mg % (normal), globulin negative and 68 cells with 40 lymphocytes and 28 polymorphonuclears; sugar 49 mg %. The patient was then carefully re-examined. He had weakness of the right sternocleidomastoid muscle, weakness of grip on the right (although right-handed), and he could not whistle.

A diagnosis of poliomyelitis was made. He became afebrile on the 5th hospital day at which time his antibiotic therapy was stopped. He was unable to swallow anything at all for a total of 10 days. Intravenous fluids were given daily, alternating with tube feedings beginning the 7th day. A spinal tap on 5 June showed 74 cells with 69 lymphocytes, sugar 77, total protein 26 and globulin negative.

He was able to swallow several cc. of water on the 11th day and took 1500 cc the next day. Gradual improvement so that three weeks later he was able to swallow all foods normally.

Examination on the 12th day revealed moderate tightness in both hamstring groups of muscles, especially on the right and some involvement of the lips in speaking and inability to whistle. Daily physiotherapy has resolved all muscle signs except that he is still unable to whistle.

Discussion:

Simple pharyngitis and then diphtheria were considered in this case before the correct diagnosis was made. Diagnosis was confirmed by the history, fever, neck discomfort on flexion, spinal fluid changes and demonstrable muscle weakness and paralysis.

Depending on the interplay of several factors, any disease may be minimal, moderate or severe. This case showed rather limited pathology, but involved a vital center. Clinically, there was little more than paralysis of the muscles of deglutition. The case falls into the bulbo-encephalitic group with involvement of the lower cranial nerves.

The lower cranial group includes the tenth, eleventh and twelfth nerves. Involvement of the tenth, especially, may be cause of death. There is interference with the function of swallowing, so that food, vomitus and secretions accumulate in the pharynx from where they may be aspirated into the lung.

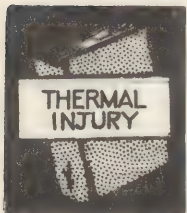
Depending on the extent of involvement, there may be nasal speech, partial or complete involvement of the soft palate, laryngeal stridor or hoarseness, or even complete laryngeal paralysis. For the last, a Magill endotracheal tube, which can ordinarily be passed blindly through the nose by an anesthesiologist, a Mosher life-saver tube, for oral passage and especially useful in children, or the performance of a tracheotomy, which can be done after either of the other two if necessary, may be life saving.

The prognosis in an individual case of poliomyelitis can never be predicted with certainty. Muscles supplied by anterior horn cells which have been completely destroyed remain degenerated and atrophic. Inflammation without destruction offers a good prognosis, provided that adequate physiotherapy is given. Improvement is usually slow after the first eight to ten months, and negligible after two to three years.

Conclusion:

Inability to swallow may occasionally present itself as the only obvious clinical symptom of poliomyelitis.

XVI. Routine Care of Burns in the Physical Therapy Department - Captain Catherine M. Bender, WMSC, Tokyo General Hospital, APO 1052



The routine care of burns in the Physical Therapy Department starts after the initial pressure dressings have been removed. A patient with a diagnosis of a second or third degree burn is usually sent to our Clinic with an order for saline whirlpool treatments. A whirlpool is a large metal tub of water with a motor attached at one end. Air is driven down through one pipe, and such causes the water to whirl or circulate in the tub. For a burn case, the temperature should be 98 degrees F., the force of the water cut low, and approximately one gallon of saturated saline solution to thirty-two gallons of water.

You may ask the questions - Why do you give a saline whirlpool? Why is this favored over other types of treatment?

The aim in the treatment of burns is the prevention of contractures and deformities. We must consider the patient both from the functional and cosmetic angles. In order to accomplish this aim, certain definite objectives must be achieved and these are:

- | | |
|---------------------------------|----------------------------|
| 1. Cleansing of the burned area | 3. Reduction of pain |
| 2. Reduction of the odor | 4. Restoration of function |

The burned area should be cleansed as quickly as possible, so that the lost surface can be restored with skin grafts before contractures have occurred and before debilitation and pain have developed beyond control. The mild swirling of the water tends to clean and dissolve some of the necrotic tissue which is bound to be present. The circulation is improved in the area and new granulation tissue is stimulated to growth.

If you have ever worked with burns, you know that there is a very definite odor attached. The cleansing of the part will tend to reduce the associated odor and aid the morale of your patient. Many patients are extremely grateful for the whirlpool treatments, for it may be the first comfort they have had, and occasionally has been a life-saving measure. Since this is a very comfortable treatment, the

patient is urged immediately to move his joints. This is one of our greatest aids in preventing contractures.

How do you actually proceed with your case of a second or third degree burn in the Physical Therapy Department?

The patient reports from the Ward to the Clinic. The burned area on your patient is found to be bandaged with moist dressings. The top dressings are removed gently and the bottom layers are soaked off in the whirlpool tub. At this time, the water is body temperature, the saline has been added to the water in the tub, and no agitation is used. The water does not swirl. It is desirable to encourage the patient to aid you in removing the bottom layer of dressings. This function diverts his mind, allays his fear, and in general, speeds up the entire procedure. A special metal can or receptacle should be nearby so all the soiled dressings can be dropped into it and disposed of immediately. If the involved area is large, it may take 20 to 30 minutes of just soaking and very gentle tugging to get the bandages off without causing bleeding. When a hand, forearm, or foot is involved, the patient is put into an arm whirlpool tub. If the legs, thighs, buttocks, back, or all are involved, the patient can be lifted up and put into a Hubbard tank or the large leg whirlpool tub. The Hubbard Tank is favored in these cases for the patient may be lifted onto a litter and submerged in the water in either the supine or prone position. If you do not have a Hubbard Tank, place a stool in the leg tub and the patient may receive his treatment in this fashion. However, if the patient cannot sit, let him squat or kneel on the bottom of the leg tub.

For an ordinary treatment, the time is 20 to 30 minutes plus soaking time. A lot depends on your patient and his reaction to the treatment. If your patient is apprehensive, if he complains of weakness, faintness, nausea, dizziness, cut down on his time and get him out of the tub immediately. Usually after the first treatment, this problem is rare, for the patient is anxious to have the comfort which is afforded by the treatment.

After the patient is removed from the whirlpool tub, the burned areas are covered immediately with strips of sterile parachute silk or fine mesh steriles. The finer the mesh the better, for this keeps the new granulation tissue from growing up in between the strands. Moist saline compresses are then applied and held in place by loosely bound roller gauze. Our patient is then returned to his ward.

How many whirlpool treatments are indicated? This answer depends on your doctor's orders and a few other factors. The routine number is two treatments per day, one in the morning, and one in the afternoon, 20 to 30 minutes plus soaking time. If your case has been extensive and severe the patient may be in a weakened state, and he can only take one treatment per day. The environmental conditions are also contributory factors. In the tropics, a patient may be taken from an air-conditioned ward to a clinic where the temperature is 100 degrees F.- 110 degrees F. The change of temperature may be too great for the patient and it is better to give him only one treatment per day. Then schedule this patient early in the morning before it gets too hot.

Many deep burns are ready for grafting in three weeks' time. The doctor's careful evaluation of the general condition of the patient, evaluation of the gross appearance of the granulations, and surrounding tissues, usually suffices for the determination of the time for skin grafting.

After the skin graft has healed, the patient returns to the Physical Therapy Department for further treatment. This time his order may read Lanolin massage, passive and active exercises to the involved parts. The site of the burn determines the treatment offered.

Let us take for example a third degree burn to the anterior aspect of the distal third of the thigh involving the knee joint. The skin graft has been completed and is healed; however, due to the fact that the patient has not used his quadriceps muscles for a long period of time, there is a certain amount of atrophy present and some fixation of the knee joint with some adherent scar tissue.

How much fixation of the joint and muscle atrophy have occurred can be measured in degrees and inches. The extension and flexion of the knee joint is measured in degrees by a goniometer. Measuring the contour of the thigh one inch and three inches above the patella will give you a good indication of muscle size. Measuring is done the first day a patient reports for treatment and once per week afterwards. This will denote definite objective progress to your patient, your doctor, and yourself.

If the skin graft is tight or slightly adherent to surrounding or underlying tissue, a Lanolin massage is given. Making the skin loose and non-adherent will aid in the restoration of normal function of the joint.

In building up muscle power and increasing the range of motion, both passive and active exer-

cises are employed. The patient is taught to do static quadriceps exercises first. A minimum of 100 healthy contractions are done by the patient every hour on the hour of the day. Active exercises are then given. The patient sits on the edge of the bed, plinth, or table and extends and flexes the leg over the edge. Last, active resistive exercises are given to the patient. The so-called "boot" and graduated weights are employed. Our maximum poundage in the Tokyo General Hospital is 20 pounds of weight. Many authorities have varying ideas on the subject. The method used here is repetition of contraction with low poundage rather than high poundage. We start with 10 contractions in extension of the knee with no weight; 10 contractions in extension of the knee with the "boot" applied, and 10 contractions in extension of the knee with the "boot" plus one pound of weight added and so up the scale to 20 pounds of weight have been utilized. The conservative method is used for there is less possibility of internal joint damage.

At the same time, it may be desirable to teach "walking" to your patient. First, we use the crutches, then canes, then graduate your patient to use his own power. The knowledge of going up and down a pair of steps should also be imparted to your patient to give him added confidence in himself.

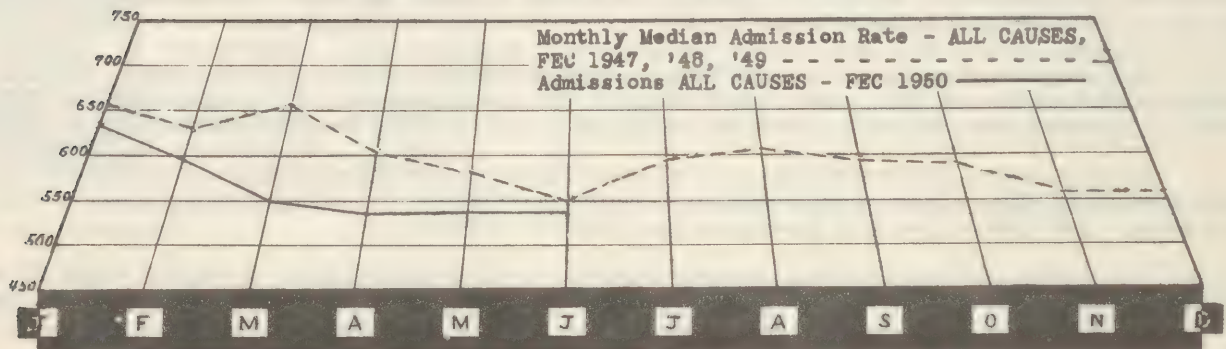
If the burn is on the posterior thigh, extending down through the popliteal space, definite contractures of tendons may develop. If this is the case, passive stretching done by hand may be of use, or the "boot" with or without weights plus an infra-red lamp may be utilized. The heat from the infra-red lamp will aid in relaxing the muscles and will increase the desired stretch of the contracture. After a 15 to 20 minute stretch, active or active resistive quadriceps exercises may be given to build up quadriceps power, to gain extension of the leg. The stationary bicycle and rowing machine are also valuable aids in active exercise for the knee joint and seem to be fun for the patient to use.

When all measurements are normal, full function is restored, and good muscle power regained, the mission of the Physical Therapy Department is completed.

PART III

STATISTICAL

HEALTH OF THE COMMAND



Admission rates per 1000 troops per annum for the five-week period ending 30 June 1950 were as follows:

	<u>FEC</u>	<u>JAPAN</u>	<u>MARBO</u>	<u>PHILCOM(AF)</u>	<u>RYCOM</u>
All Causes	534	570	333	332	503
Diseases	476	515	266	295	425
Injuries	58	55	67	37	78
Psychiatric	8.5	8.7	2.2	4.1	12

	<u>FEC</u>	<u>JAPAN</u>	<u>MARBO</u>	<u>PHILCOM(AF)</u>	<u>RYCOM</u>
Common Respiratory Diseases and Influenza	42	47	22	9.6	38
Primary Atypical Pneumonia	1.8	1.3	0	1.4	5.9
Common Diarrhea	4.4	2.4	0	4.1	18
Bacillary Dysentery	.28	0	0	0	2.1
Amebic Dysentery	.14	0	0	2.7	0
Malaria, new	.14	.19	0	0	0
Infectious Hepatitis	5.9	7.2	0	1.4	3.2
Mycotic Dermatoses	1.1	1.0	0	0	2.7
Rheumatic Fever	.14	.19	0	0	0
Venereal Diseases	145	162	28	84	126

The health of the personnel of the Far East Command continued good through June. For the fifth week of June, no data were received on 24th Division personnel in Korea, and therefore for that week they are not included in this report. The all causes admission rate to hospital and quarters for Army and Air Force personnel during June was 534 per thousand per year. This is identical to the rate for the previous month and is among the lowest recorded for this command. The non-battle injuries component of the all causes rate decreased from the unusually high rate of 62 in May to 58 this month. In contrast, the disease component increased from a rate of 472 in May to 476 for June. Among the major commands, the only appreciable changes in the all causes admission rate occurred in RYCOM which had a decrease from 558 in May to 503 in June, and MARBO, which experienced an increase from 274 in May to 333 this month. Japan, with a rate of 570 continues to be the highest among the commands.

The average daily non-effective rate for all causes for June was 15 per thousand, presenting no change for the past three months. This compares favorably with the combined non-effective rate of 19.5 for total Army and Air Force for the same period a year ago. The venereal diseases component of the non-effective rate for June was .17. This is a slight increase above the rates of .14 for April and May and amounts to about 1% of all non-effectives.

DISEASES: No unusual incidence of diseases was reported during the month.

Malaria: The incidence of new malaria continues at a low rate. For June the rate per thousand per year was .14. Only twice, in February and April this year, has the rate been this low or lower. The cases for June occurred in Japan.

Diarrhea and Dysentery: The rate of intestinal diseases infections incidence increased from 2.8 in May to 4.9 for June. All major commands reported increases in these diseases except MARBO which had none. The chief contributors were RYCOM and PHILCOM(AF) whose rates increased from 10 to 20 and 3.5 to 6.9, respectively. Japan experienced a slight increase from 1.8 in May to 2.4 in June. The overall rate is considered within the seasonal expected range.

Infectious Hepatitis: The incidence of infectious hepatitis through the first half of 1950 indicates a slight upward trend. The annual rate per thousand for 1948-1949 was 3.9; the first six months in 1950 shows a rate of 4.9. Of the major commands, Japan appears to be the principle contributor to the increased incidence, showing an increase from 3.9 and 3.7 in 1948 and 1949 respectively, to 6 for the first half of 1950. The Far East Command rate of 4.9 for the first half of this year compares favorably with the following rates for 1949: Europe about 12.5 and total Army about 3.5.

Poliomyelitis: As reported, through May of this year, 7 cases of poliomyelitis with no deaths resulting, had occurred among all occupation personnel of the Far East Command. In June, 9 additional cases with 1 death resulting, were reported. Of the above 16 cases, 7 occurred in Japan, and 9 in PHILCOM(AF).

Venereal Diseases: The total venereal diseases rate for the command reflects no appreciable change during the past three months, during which time it was 147 in April, 146 in May and 145 for June. Only in March, at which time the rate was 136, has it been lower since March of 1949. RYCOM's rate of 126 for June is the lowest reported from that command since February 1949. Japan, MARBO and PHILCOM(AF), although experiencing some slight monthly fluctuation, have maintained a rather constant rate for the past five months.

Non-Battle Injuries and Deaths: The non-battle injuries rate for June decreased from the rather unusual high of 62 per thousand per annum in May to 58. Twenty-five deaths were reported

during the five-week period, 4 of which resulted from diseases and 21 from injuries.

Evacuation:



Tabulated below are the number of patients evacuated from the major commands to the ZI during the five-report weeks in June and the number of patients awaiting evacuation as of 30 June 1950:

	<u>BY AIR</u>	<u>BY WATER</u>	<u>TOTAL</u>	<u>PNTS AWAIT EVAC</u>
JAPAN	200	14	214**	62
MARBO	18	1	19	7
PHILCOM(AF)	14	0	14	0
RYCOM	39	19	58	33
FEC	271	34	305	102

(** One patient originated from Korea.)

Hospitalization:

The bed status as of 30 June 1950 was as follows:

	<u>Bed Capacity</u>		<u>Operating</u>		<u>% Normal Bed</u>	<u>% of Operating</u>
	<u>Normal</u>	<u>Mobilization</u>	<u>Beds</u>	<u>Beds Occupd.</u>	<u>Capacity Occupd.</u>	<u>Beds Occupd.</u>
JAPAN	3,936	5,575	3,571	1,584	40	44
MARBO	200	200	200	65	33	33
PHILCOM(AF)	1,919	2,407	693	453	24	65
RYCOM	250	300	250	166	66	66
FEC	6,305	8,482	4,714	2,268	36	48

MEDICAL SERVICE - STANDARDS FOR MEDICINAL AGENTS

The following Department of the Army Regulations No. 40-507, 8 May 1950 - Medical Service, Standards for Medicinal Agents, is published as a matter of information:

"1. Establishment. - These regulations establish standards of efficacy and safety for medicinal agents authorized for use in Medical Department installations.

"2. Criteria. - No medicinal agent which has not first met one or more of the following conditions will be administered to patients under the care of the Medical Department of the United States Army:

- a. Inclusion in the Armed Services Catalog of Medical Materiel.
- b. Inclusion in the United States Pharmacopoeia.
- c. Inclusion in the National Formulary.
- d. Acceptance by the Council on Pharmacy and Chemistry of the American Medical Association (inclusion in "New and Nonofficial Remedies" or its interim supplements).
- e. Acceptance by the Council on Dental Therapeutics of the American Dental Association.
- f. Specific approval of the Surgeon General or of the appropriate overseas command surgeon."

FIBRIN FILM, HUMAN

Departments of the Army and the Air Force Circular 37, AF Letter 160-206, 12 July 1950, is quoted as a matter of information:

"FIBRIN FILM, HUMAN, 8 BY 13 CM (MEDICAL STOCK NO. 1-604-775) -

1. The expiration date of the following lot numbers for Medical Stock No. 1-604-775, Fibrin Film, Human, 8 by 13 CM, manufactured by the Cutter Laboratories, is hereby extended to 1 April 1953:

B-7411
B-7267
B-7275

2. Stocks of the above lot numbers should be used until 1 April 1953, notwithstanding the expiration date shown on the package."

IN THIS ISSUE

	<u>PAGE</u>
A Clinical Evaluation of Tetraethylthiuramdisulphide (Antabuse) in the Treatment of Problem Drinkers.	5
An Unusual Case of Poliomyelitis.	15
Authority to Award the Purple Heart	1
Autopsies	2
Award of the Bronze Star Medal to MSC Officer	2
Clinical Psychology Intern Program at Walter Reed Hospital.	4
Combat Neuropsychiatry.	3
Conference on Medical Research.	4
Current Military Routine Immunization Requirements for Japan and Korea.	Center Sheet
Diagnostic Titles for Dental Conditions	9
Hepatic Center Moved to Army Medical Center	4
Medical Service - Standards for Medicinal Agents.	20
New Dental Courses Scheduled.	4
Organization of the Medical Section	1
Physical Examination re: National Service Life Insurance	3
Recent Department of the Army and FEC Publications.	4
Routine Care of Burns in the Physical Therapy Department.	16
Statistical	18
Temporary Dental Requirements for Enlistment and Induction.	3



The Chief Surgeon extends an invitation to all personnel of the Medical Department to prepare and forward, with view to publication, articles of professional or administrative nature. It is assumed that editorial privilege is granted. Copy should be forwarded so as to reach the Medical Section, GHQ, FEC, not later than the 10th of the month preceding the issue in which publishing is desired.

Major Vincent I. Hack, Editor